

### Abstract

Optical waveguides interconnect optical information processing devices, or connect such devices with other optical communication links such as glass optical fibers. Fluoropolymers consisting of alternating perfluorocyclobutane and aryl ether linkages possess suitable properties for optical waveguides and other devices due to tunability in optical properties of the copolymers. Perfluorocyclobutane (PFCB) copolymer may be employed in solutions that exhibit a high solids content. Such solutions show useful physical properties for optical waveguide devices since the solutions are capable of achieving single step film thicknesses, when applied to a substrate, of greater than about 0.6 microns, and sometimes may achieve a thickness of 10 microns or more.

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